

CANDIDATE SPECIES

Yellow-billed Cuckoo (*Coccyzus americanus*)

The yellow-billed cuckoo has been identified by the FWS to possibly have potentially suitable habitat on the Fishlake National Forest. According to Parrish et al. (2002), Utah contains 11-25 % of the yellow-billed cuckoo's total breeding distribution. This species has not been confirmed on the Forest, and its presence is unlikely because it is associated with low elevation cottonwood riparian areas with dense understories. Because the lower elevations of the Forest are much higher than this species is known to occur, limited habitat exists on the Forest. Therefore, it is highly unlikely that this species will be located. However, a specific search image for this species has been developed in cooperation with DWR Avian Program Manager Dr. Frank Howe, FWS wildlife biologist Laura Romin, and Ron Rodriguez, Dixie and Fishlake National Forest Wildlife Fish and Rare Plant Program Manager. The Forest is in its third year of survey efforts and has not located any birds to date.

The yellow-billed cuckoo is named for the striking yellow base of the lower mandible. Adults are about 12 inches long and slender in profile. They weigh about two ounces. The cuckoo is brownish-gray from above, with white undersides and tail, which is boldly marked with large black spots. The bill is stout, slightly down-curved, and generally blue-black. Like all members of the Cuculidae family, the cuckoo has zygodactyl feet with two forward and two rearward pointing toes (USFWS 2001).

Western yellow-billed cuckoos formerly ranged across southern Canada (British Columbia), northern Mexico (Sonora and Chihuahua), and all states west of the Continental Divide/eastern Rio Grande Basin. The eastern boundary of the western yellow-billed cuckoo, as defined by the U.S. Fish & Wildlife Service (2001), is the crest of the Continental Divide in Montana, Wyoming, and northern and central Colorado. In southern Colorado, New Mexico, and Texas, the crests of mountain ranges forming the eastern edge of the Rio Grande watershed define the eastern boundary.

Though limited interactions may possibly occur between eastern and western yellow-billed cuckoos across the Rocky Mountains in the northern part of the range, the probability is limited because cuckoos do not nest at high elevations, and the species is scarce on both the eastern and western slopes of the Rockies. At the southern extent of its range in Texas, mixing of eastern and western cuckoos is more likely, as geographic barriers are not as pronounced.

The current breeding range is much smaller than the historic range. As a breeding species, the cuckoo was extirpated from British Columbia in the 1920's, Washington State in the 1930's, and Oregon in the 1940's. Three populations totaling about forty pairs of birds remain in California on the Sacramento River (between Colusa and Red Bluff), the South Fork of the Kern River, and the lower Colorado River. Breeding pairs inhabit rivers throughout Arizona and New Mexico. Scattered populations remain in western Texas. The cuckoo is extremely rare in the rest of the interior west. Cuckoos breed

locally in Mexico, but recent or quantitative information for the area is lacking (USFWS 2001).

Biologists have generally distinguished western (*Coccyzus americanus occidentalis*) and eastern (*Coccyzus americanus americanus*) subspecies (Franzreb and Laymon 1993, Pruett et al. 2001). The western subspecies is alternatively called the "California" yellow-billed cuckoo. Other biologists, however, have questioned whether the difference between the eastern and western birds is sufficient to declare them separate subspecies (Fleischer 2001, USFWS 2001).

In the FWS determination that the western yellow-billed cuckoo warrants listing as a federally threatened species, the U.S. Fish & Wildlife Service concluded that the subspecific status of the cuckoo remains unknown, but that it qualifies as a "distinct population segment" due to the following differences:

1. The western population is separated from the eastern population by the Rocky Mountains in Montana, Wyoming, and the northern and central parts of Colorado, and by the eastern crest of the Rio Grande watershed in southern Colorado, New Mexico, and western Texas.
2. Western yellow-billed cuckoos arrive in the U.S. from their South American wintering grounds and begin to nest at least 3-4 weeks later than eastern yellow-billed cuckoos. The western population's nesting period is shorter. The eggs of the western population are larger, heavier, and have a thicker shell, possibly as an evolved protection against desiccation in the West's drier climate.

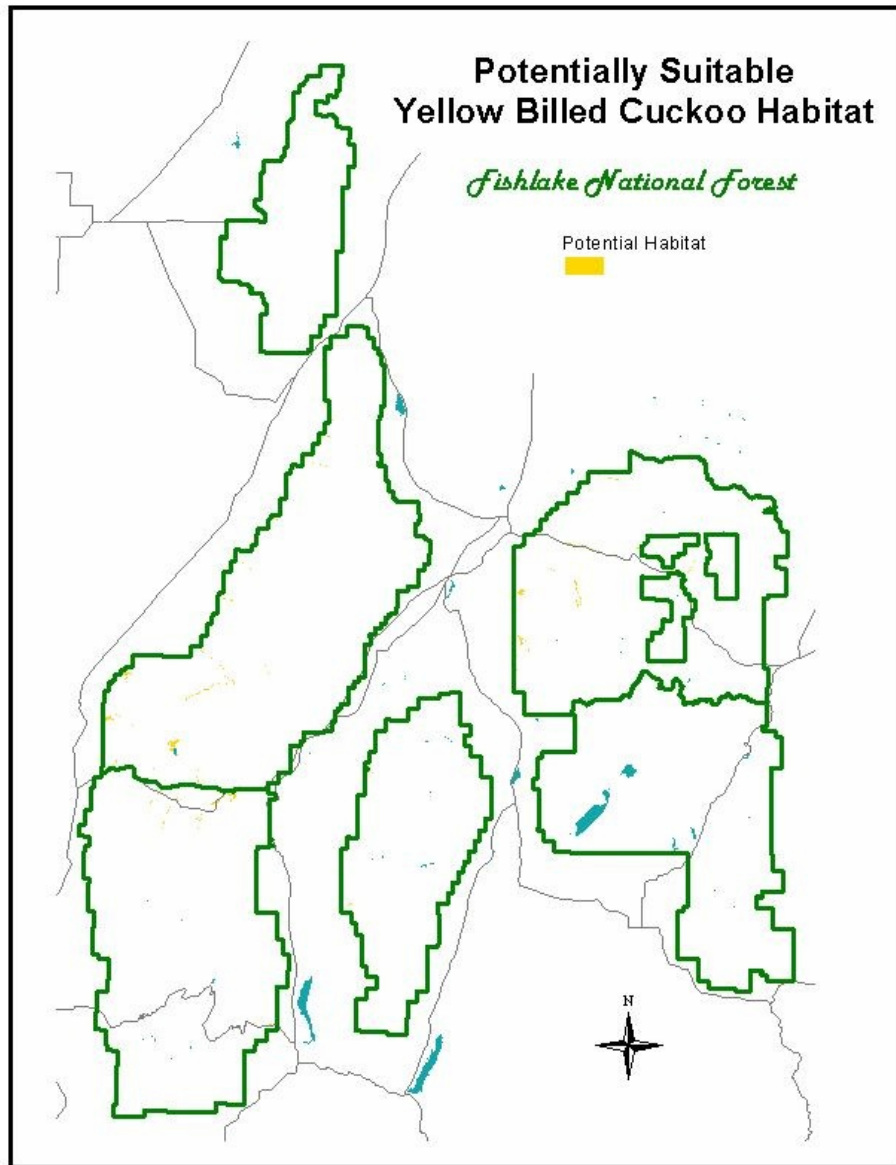
Western birds are generally larger and heavier, with orange rather than yellow mandibles. Western juveniles have yellow bills, whereas young eastern birds appear to have black bills. Western cuckoos are sharply limited to narrow streamside forests within an otherwise unsuitably arid landscape, while eastern birds occur in broad flood plains, humid upland forests, and occasionally even in suburban areas (USFWS 2001).

There is genetic evidence of long-term (Pruett et al. 2001) and short-term (Fleischer 2001) isolation between eastern and western birds.

Western yellow-billed cuckoos are obligate riparian nesters; they only breed in streamside forests, especially those dominated by willow and cottonwood stands. The humid, shady environment provides a protective microclimate, protecting nesting birds, eggs, and fledglings from the desiccating heat and dryness prevalent in late summer across the western U.S. East of the Continental Divide, where nesting occurs 3-4 weeks earlier and within landscapes which are generally more humid, eastern yellow-billed cuckoos use a broader range of nesting habitats, including some areas of upland forests and parks. Most nesting in the west occurs within relatively large patches of riparian forest, usually 25-100 acres in extent. Habitat use and selection in South American wintering grounds is not well known (USFWS 2001).

They typically lay two or three eggs, and development of the young is very rapid, with only seventeen days pass between egg laying and fledging. This very short time period allows western yellow-billed cuckoos to time their nesting around localized outbreaks of cicadas and tent caterpillars (USFWS 2001).

The map displayed below identifies 4,226 acres of potentially suitable habitat for the yellow-billed cuckoo on the Fishlake National Forest. The search image for this map was developed based on a conversation with Dr. Frank Howe, Avian Program Manager with the Division of Wildlife Resources in Salt Lake City, Utah. The search image that was agreed upon was to survey riparian habitats below 7,000 thousand feet with a cottonwood/willow over-story and dense brushy understories with slopes less than 10%.



Despite surveys conducted during the field season of 2002, 2003, and 2004 no birds were located. Although no birds have been detected during field reviews, it would be premature to determine that this species does not occur on the Fishlake National Forest, therefore, survey are ongoing.

Wonderland Alice-flower (*Alicellia caespitosa*)

A. caespitosa, a member of the Phlox family (Polemoniaceae), grows in clumps from a taproot and branching caudex. It is clothed with persistent leaf bases and is terminated in rosettes of leaves. Herbage is glandular, often with adherent sand grains. The basal leaves are oblanceolate to linear and 3-20 mm long. Flowering stems (3-8 cm tall) are solitary or few to several per stalk. The petals are scarlet, fading maroon, or blue-purple with a 9-17 mm long tube (Welsh et al. 2003). Flowering occurs from June through July, with seed setting from late July into the end of August (Spahr et al. 1991).

A. caespitosa is associated with cliffs, ledges, and exposed outcrops, representing eroded or detrital Navajo and Wingate sandstones. Plants occur in full sun or in shady canyons, on exposed sandstones, cliff walls, and less commonly, sandy wash bottoms, all between 5,100 and 9,000 feet. This flower occurs in association with open pinyon-juniper woodlands, which are often mixed with some elements of mountain brush, sagebrush steppe, or ponderosa pine forests. It is restricted to scattered occurrences, from the northern Waterpocket Fold to Thousand Lakes Mountain and Rabbit Valley in Wayne County. This species is a very narrow endemic, known only from unstable and faulting soils (USDA et al. 1996).

Threats to this species include off-road use, recreational use, road and trail building/maintenance, mining, pesticide use, and collection. *A. caespitosa* is not affected by grazing as it occurs on steep slopes where cattle grazing does not occur (USDA et al. 1996).

A. caespitosa is currently a candidate species for federal listing under the Endangered Species Act (69 FR 24900). A Conservation Agreement and Strategy for this species was written by the BLM, USFS, FWS, and National Park Service (USDA et al. 1996). Protection measures described in the Agreement were designed to achieve long-term conservation of the species so that formal listing would not be warranted.

Wonderland Alice-flower is only known to occur in 2 locations on the Loa Ranger District of the Fishlake National Forest (Clark 2002). Recent changes in plant nomenclature have suggested that the plant be named *Aliciella caespitosa* instead of the previous *Gilia caespitosa* (Rabbit Valley *gilia*).